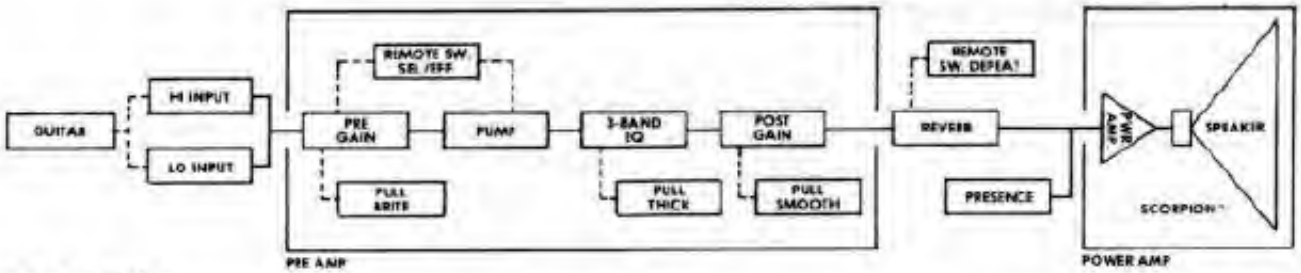
ENCORE 65™
VINTAGE TUBE SERIES

OPERATING GUIDE

CAUTION
TO PREVENT ELECTRICAL SHOCK OR FIRE HAZARD, DO NOT EXPOSE THIS INSTRUMENT TO RAIN OR MOISTURE.
BEFORE USING THIS INSTRUMENT READ BACK COVER FOR FURTHER WARNINGS.

GENERAL DESCRIPTION

The Encore™ 65 delivers 65 watts of vacuum tube power into a 4 (or 2) ohm load and is designed to produce the "vintage tube sounds" sought after by many of today's demanding rock'n'roll guitarists. The Encore™ 65 is also equipped with our "gain block" which incorporates pre and post gain controls and features our new Pump control which is footswitch selectable in addition to pull bright, pull smooth and pull thick effects. The system employs conventional three band equalization that has been specifically voiced to reproduce the popular "English Rock" sound and is also equipped with a presence control which provides the capability of adding high frequency "bite" to the signal. We have also added a new and unique hum balance circuit which incorporates a user accessible control that allows the hum level in the system to be set at minimum level at all times. The Encore™ 65 is housed in a rugged 3/4" wood cabinet covered with heavy duty 34 oz. vinyl covering material. In addition to the above, we have included a 12" Scorpion™ loudspeaker whose characteristics have been carefully matched to complement the frequency response, power output, and damping factor of the Encore™ 65 power amplifier.

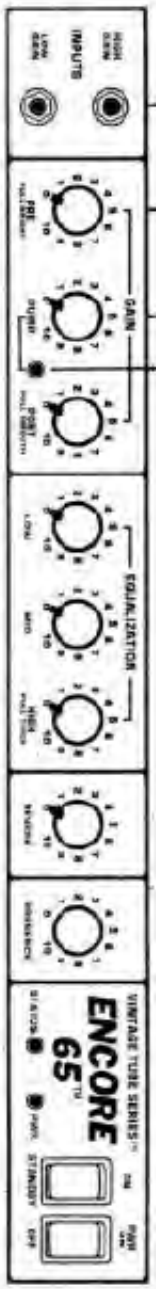


SIGNAL FLOW

The Encore™ 65 is a single channel amplifier with two primary electronic sections (preamplifier and power amplifier). When signal is introduced through either the Hi or Lo gain input jacks, it travels to the preamp section where it is amplified and processed. In the preamp section the signal travels through the pre gain, pump, which is footswitch selectable, equalization and post gain circuits. Pull bright, pull smooth and pull thick effects may be added to the signal or they may be bypassed. The signal now travels through other effects, reverb and/or presence if desired, into the power amplifier. The power amplifier then delivers an amplified signal to the speaker.

Please study the flow chart. Since each control interacts with and has an effect on other controls, a complete understanding of signal flow will lead to maximum utilization of the unit's advanced features and capabilities. We have also included several charts to give you some basic control settings with which to begin. Slight modifications to these settings may be necessary to suit your own individual tastes and performing requirements.

Following is an explanation of each control's purpose and operation. Experimentation with each control will aid in an overall understanding of your new amplifier.



INPUTS

Two input jacks are provided, each having different sensitivities and a unique arrangement allowing the gain of both jacks to be equalized when instruments are plugged into both jacks simultaneously.

The high gain jack has considerably more sensitivity and input impedance than the low gain jack and is the input normally used with most instruments, especially when maximum distortion and overdrive are desired.

The low gain jack exhibits approximately 6 dB less gain and is intended primarily for use with instruments which have extremely high output pickups. "Hot" pickups will sometimes prematurely overload the high gain input circuitry causing an unpleasant tonality and harsh overdrive characteristics.

The difference between the two jacks may be seen by plugging into the high gain jack and setting the gain of the amp to an appropriate level. Now plug the instrument into the low gain jack being sure to leave both amp and instrument gain at the same settings. The overall system gain will now be lower as noticed by a decrease in volume.

GAIN BLOCK

The lead channel has been designed utilizing Peavey's new "GAIN BLOCK" signal processing front end circuitry. The three interacting controls provide total control of the amp's gain structure (dynamics), harmonic content, overload texture, and output level.

Each of the three controls must be understood and experimented with in order to utilize the potential of this specialized circuitry. Note in the SIGNAL FLOW BLOCK DIAGRAM where each of these controls falls into the flow pattern. The setting of each control will interact with and have an effect on the action of the other controls.

PRE GAIN/PULL BRIGHT

The pre gain control is the input level control for the lead channel. Operation of this control is conventional in that rotating the control clockwise increases the gain in the preamp section thus raising the volume level of the system.

The pre gain control also features an integral "pull" switch which adds a significant boost (8 dB) to the high frequencies when activated. This high frequency boost gives a nice "edge" to clean playing styles. However, experience has proven that this high boost tends to detract somewhat from the smooth overload characteristics when playing in the distortion mode. The pull bright switch should therefore be in its off (pushed in) position when the smoothest distortion characteristics are desired.

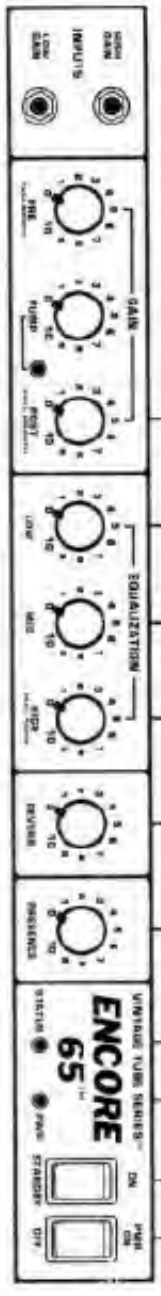
PUMP

This control provides the means for adding distortion to the signal. This is accomplished by overdriving the preamplifier tubes and also introducing significant additional gain into the circuit. (40 dB maximum clockwise) Another characteristic of this control is that as it is being turned up (clockwise) it gradually defeats the pre gain control until a point is reached at which the pre gain has very little effect at all.

The pump control is also footswitch selectable. The select/effects pushbutton on the supplied remote footswitch may be used to turn the pump circuit on or off. This function is particularly useful when selecting between clean and distorted sounds is necessary.

PUMP LED

This red LED (light emitting diode) provides visual indication of the status of the pump circuit. When the pump circuit is activated, the LED turns on.



POST GAIN/PULL SMOOTH

The post gain control sets the input sensitivity of the power amp section. The action of this control is similar to a master volume control and can be used to control the overload dynamics of the preamp section by decreasing the sensitivity of the power amp and determining the overall volume level of the system.

Incorporated into the post gain control is an integral "pull smooth" switch which when activated provides a selected amount of cut to the extreme high end frequencies (6 dB). Just as pull bright is desirable for clean playing by adding highs, the pull smooth feature may be used to enhance the smooth overload characteristics that are desirable when playing in the distortion mode. Generally, when a clean sound is desired the pull smooth feature should not be activated.

EQUALIZATION

The Encore™ 65 features conventional type three band equalization circuitry which will provide almost unlimited tonal variations. It is of particular interest to note that the equalization circuit has been specifically designed to reproduce the popular "English Rock" sound.

LOW EQ

The low frequency control determines the low frequency (bass) response of the lead channel. Rotating the control clockwise increases low end response.

MID FREQUENCY EQ CONTROL

The action of the middle control is conventional with increasing midrange response as the control is rotated clockwise. This control is very effective in determining the overall "color" of the sound when using the pump overload feature of the amp. Generally, a much "thicker" and "fatter" sound is obtainable when more mid boost is used for hard rock. For clean country/jazz playing, more mid cut is usually better. . In any case, this EQ works and should be used to "fine tune" the overall low and high EQ to produce the desired tonal color.

HIGH FREQUENCY EQ/PULL THICK CONTROL

This control element determines the amount of high frequency response. The action of this control is conventional with an increasing amount of high boost obtained as the control is rotated clockwise. This high EQ circuit is extremely effective and should provide more than enough tonal variation for achieving almost any amount of "top end" required.

When playing hard rock, it is usually not a good idea to use maximum high end boost since excessive highs tend to make the smooth overload characteristics of the amp somewhat more "strident" and "harsh" than is usually desirable.

PULL THICK

Incorporated into the high equalization control is a "PULL THICK" switch which drastically alters the tonality of the entire equalization system. This pull switch adds significant amounts of upper mid frequencies and has the overall tendency to create a full "thick" midrange tonality. The pull thick control when used in conjunction with the pump control in the lead channel will produce today's "rock" sound. NOTE: When "Pull Thick" is activated, the 3 band equalization controls and particularly the low and mid, will have very little effect on the overall sound.

REVERB

This control determines how much delayed signal (reverb) is blended back into the main output signal. This control is conventional in operation and should present no difficulty. Please remember that the reverb function may be remotely controlled by use of the supplied remote footswitch plugged into the remote socket on the rear of the chassis.

PRESENCE EQ CONTROL

To allow total control, we have included a conventional type presence circuit which is applicable to the equalization in each channel. This control is located POST (after) the regular EQ controls and is provided for precisely tailoring the extreme highs enabling you to add that extra edge (+6dB) so often required by various playing styles. To increase the amount of presence, turn the control clockwise.

OPERATIONAL STATUS LED (Green)

The green LED indicates when the amplifier is operational (green on) or is in the standby mode (green off).

PILOT LED (Red)

The red pilot LED (light emitting diode) indicates when the on/off switch has been placed in its "on" position and power is being supplied to the amplifier. An LED has a virtually infinite life span and should never need replacing throughout the life of the unit.

STANDBY SWITCH

The standby switch is a simple, two position switch that allows the amp to be placed in the standby or active mode.

ON/OFF SWITCH

The on/off switch is a simple, two-position switch which should present no operational problems.

BACK PANEL

LINE CORD

For your safety, we have incorporated a three-wire line (mains) cable on the rear of the chassis with proper grounding facilities. It is not advisable to remove the ground pin under any circumstances. If it is necessary to use the amp without proper grounding facilities, suitable grounding adaptors should be used. Much less noise and greatly reduced shock hazard exist when the unit is operated with the properly grounded receptacles.

HUM BALANCE

Incorporated into the Encore™ 65 is a unique hum balance circuit. The hum balance control enables you to minimize the amount of hum noise generated by the filaments in the tubes. In order to properly set the hum balance, first turn the unit on and set the pre gain, pump, and post gain controls each at level 7 on the dials. Turn the reverb control off. The procedure must be performed with no signal applied, so make sure that no instruments, effects, devices, etc., are connected to the system. Listen to the speaker and gradually rotate the hum balance knob. You will reach a point where there is virtually no hum at all and this is where the control should be set. This is a very simple procedure and does not have to be performed every time you set up the amp. However, the physical properties of tubes do change with age, so it's a good idea to make a periodic check of the hum level dependent upon how much you use your amp. When new tubes are installed, the hum balance will have to be reset accordingly.

GROUND LIFT SWITCH

This switch is the three-position type with the center (0) position completely removing the internal grounding capacitor from the circuit. This position is normally recommended for situations where the AC power receptacle is known to contain a properly grounded third wire. If properly grounded AC mains supply is not available, a suitable ground lift adaptor should be used. The (+ and -) positions are used to ground the amplifier properly when only two-wire services are available. One of these positions will yield the lowest amount of residual hum or "popping" when the instrument is touched.

NOTE

THE GROUND LIFT SWITCH IS NOT OPERATIONAL ON 220 VOLT AND 240 VOLT EXPORT MODELS.

SPEAKER JACKS

A special output transformer allows the Encore™ 65 to deliver its full 65 watt RMS output into either a four or two ohm speaker load. The internal speaker load from the factory is four ohms and should be plugged into the main jack.

When a four ohm extension (stack) cabinet is employed in addition to the normal four ohm load, it should be plugged into the auxiliary jack. The auxiliary jack is a switching jack which activates the two ohm tap on the output transformer allowing full power output into both speaker systems.

When it is desired to use an extension cabinet with an impedance greater than four ohms, it should also be plugged into the auxiliary jack. Power output will be **slightly** decreased in this mismatched configuration.

CAUTION:

WE DO NOT RECOMMEND OPERATING THE ENCORE™ 65 INTO LESS THAN A TWO OHM TOTAL LOAD. **NO** VACUUM TUBE AMP SHOULD EVER BE OPERATED WITHOUT A LOAD (SPEAKER) ON THE OUTPUT JACKS.

REMOTE SWITCH JACK

The remote switch jack is the standard type ¼" stereo phone jack and should present no operational problems.

The remote footswitch provides the means for turning the pump or reverb circuits on or off via the footswitch.

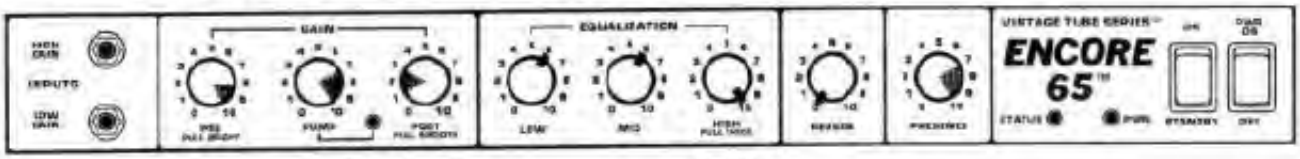
PREAMP OUT/POWER AMP IN

To allow "in line" patching of various accessories, we have included a system of preamp out/power amp in jacks on the rear panel. The preamp out is the straight preamp signal plus reverb. The output level is approximately 2 volts RMS at 10K ohms impedance. The preamp out signal is connected through a switching contact to the power amp input jack, and normally the preamp out is internally connected to the power amp's input. This circuit allows basically two modes of operation. When signal is taken from the preamp output, signal is also delivered to the internal power amplifier. If access to the internal power amplifier is needed or if some accessory device such as a noise gate, delay line, effects device, etc., is to be patched "in line", then the preamp output signal must be connected to the auxiliary unit's input, while the auxiliary unit's output must be connected to the power amp input with shielded cables, thereby placing the auxiliary unit in series of "in line" with the normal signal path. Additional booster amp/speaker combinations should be patched using the preamp output. With this unique patching facility, many interesting effects can be accomplished.

Please note that the power amp input has a sensitivity of 2 volts RMS at an input impedance of 47K ohms. Any device capable of interface with this impedance and/or level should function satisfactorily.

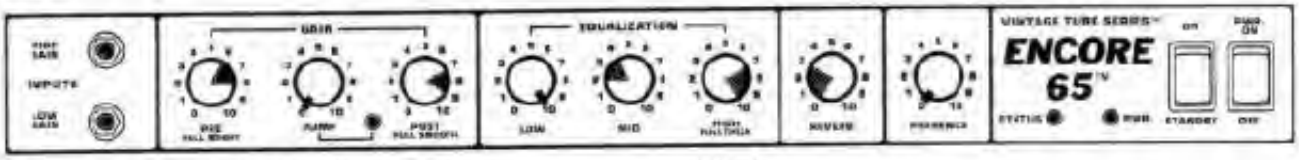
TONE SETTINGS

SMOOTH DISTORTION AT MODERATE LEVEL



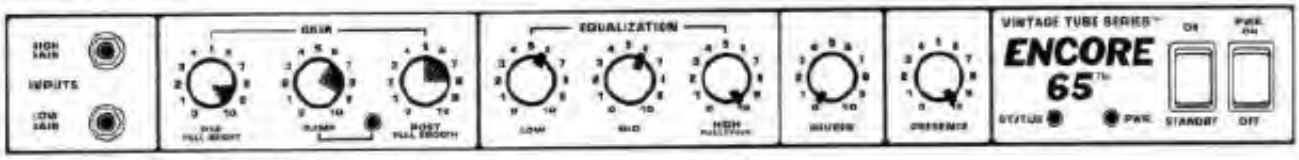
DEFEAT ACTIVATE ACTIVATE OPTIONAL

JAZZ



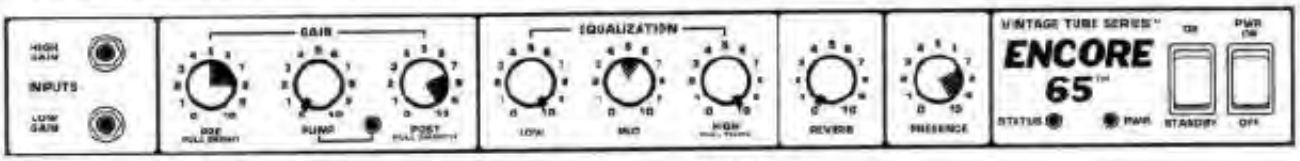
OPTIONAL DEFEAT OPTIONAL DEFEAT

ENGLISH ROCK



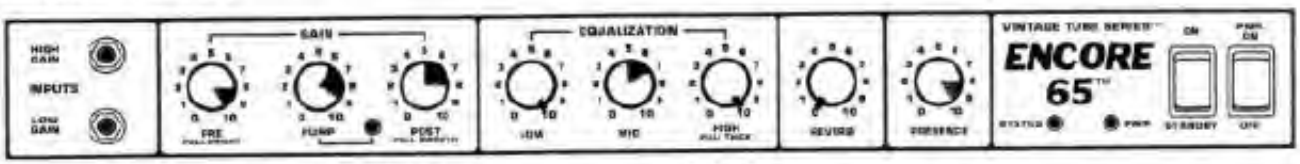
DEFEAT ACTIVATE DEFEAT DEFEAT

CLEAN — ADD REVERB IF DESIRED



ACTIVATE DEFEAT DEFEAT DEFEAT

AMERICAN ROCK



DEFEAT ACTIVATE DEFEAT ACTIVATE

SPECIFICATIONS

ENCORE® 65 SPECIFICATIONS

POWER AMPLIFIER SECTION:
2 - 6L6GC's with QUAD Driver

RATED POWER AND LOAD:
65 W RMS into 4 or 2 ohms

POWER @ CLIPPING:
(Typically @ 5% THD, 2 kHz, 120 VAC line)
70 W RMS into 4 ohms
80 W RMS into 2 ohms
(Bias must be ignored to measure)

FREQUENCY RESPONSE:
+0, -2 dB 50 Hz to 20 kHz @ 50 W RMS into 4 ohms

HUM AND NOISE:
Greater than 85 dB below rated power

HUM BALANCE CONTROL:
Adjust for minimum hum @ max pump

POWER CONSUMPTION:
200 watts 50/60 Hz, 120 VAC (domestic)

PREAMP SECTION:
2 - 12AX7's (dream/reverb return)
1 - 12AT7 (mixer/reverb drive)

The following specs are measured @ 1 kHz with the controls preset as follows:

Pre Gain/Pull Bright Off (in)
Pump @ 0
Post Gain @ 10
Post Gain Pull Smooth Off (in)
Low EQ @ 10
Mid EQ @ 10
High EQ @ 10
Pull Tone Off (in)
Presence @ 0
Reverb @ 0

Nominal levels are with pre gain @ 5
Minimum levels are with pre gain @ 10

PREAMP HIGH GAIN INPUT:
Impedance: Very high Z, 2.2 M ohms
Nominal Input Level: -26 dBV, 50 mV RMS
Minimum Input Level: -40 dBV, 10 mV RMS
Maximum Input Level: 0 dBV, 1 V RMS

PREAMP LOW GAIN INPUT:
Impedance: High Z, 44K ohms
Nominal Input Level: -20 dBV, 100 mV RMS
Minimum Input Level: -34 dBV, 20 mV RMS
Maximum Input Level: +6 dBV, 2 V RMS

PREAMP OUTPUT:
Load Impedance: 10 K ohms or greater
Nominal Output: +6 dBV, 2 V RMS
Maximum Output: +18 dBV, 8 V RMS

POWER AMP INPUT:
Impedance: High Z, 47 K ohms
Designed Input Level: +6 dBV, 2 V RMS
(Switching jack providing preamp output to power amp input connection when not used)

SYSTEM HUM & NOISE @ NOMINAL INPUT LEVEL:
(20 Hz to 20 kHz unweighted)
Greater than 80 dB below rated power

EQUALIZATION:
Special low, mid, and high passive type EQ with pull push, speak/ pump EQ with pull smooth
Pull Bite: +8 dB @ 0 kHz
Pull Smooth: -8 dB @ 2 kHz
Presence: +8 dB @ 5 kHz

AUTO MIX FEATURES:
Reverb Footswitch Function
Reverb defeat
PUMP FOOTSWITCH FUNCTIONS
Pump Gain Defeat (reduces setting in 3)
Post Gain Restore (increases setting to 10)
Pull Smooth Defeat (if selected)
Pull Bright Restore (if selected)
Turns off Pump LED

DANGER

EXPOSURE TO EXTREMELY HIGH NOISE LEVELS MAY CAUSE A PERMANENT HEARING LOSS. INDIVIDUALS VARY CONSIDERABLY IN SUSCEPTIBILITY TO NOISE INDUCED HEARING LOSS, BUT NEARLY EVERYONE WILL LOSE SOME HEARING IF EXPOSED TO SUFFICIENTLY INTENSE NOISE FOR A SUFFICIENT TIME.

THE U.S. GOVERNMENT'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) HAS SPECIFIED THE FOLLOWING PERMISSIBLE NOISE LEVEL EXPOSURES:

DURATION PER DAY IN HOURS	SOUND LEVEL dBA SLOW RESPONSE
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼ or less	115

ACCORDING TO OSHA, ANY EXPOSURE IN EXCESS OF THE ABOVE PERMISSIBLE LIMITS COULD RESULT IN SOME HEARING LOSS. EAR PLUGS OR PROTECTORS IN THE EAR CANALS OR OVER THE EARS MUST BE WORN WHEN OPERATING THIS AMPLIFICATION SYSTEM IN ORDER TO PREVENT PERMANENT HEARING LOSS IF EXPOSURE IS IN EXCESS OF THE LIMITS AS SET FORTH ABOVE. TO INSURE AGAINST POTENTIALLY DANGEROUS EXPOSURE TO HIGH SOUND PRESSURE LEVELS, IT IS RECOMMENDED THAT ALL PERSONS EXPOSED TO EQUIPMENT CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS SUCH AS THIS AMPLIFICATION SYSTEM BE PROTECTED BY HEARING PROTECTORS WHILE THE UNIT IS IN OPERATION.

CAUTION

THIS AMPLIFIER HAS BEEN DESIGNED AND CONSTRUCTED TO PROVIDE ADEQUATE POWER RESERVE FOR PLAYING MODERN MUSIC WHICH MAY REQUIRE OCCASIONAL PEAK POWER. TO HANDLE OCCASIONAL PEAK POWER, ADEQUATE POWER HEADROOM HAS BEEN DESIGNED INTO THIS SYSTEM. EXTENDED OPERATION AT ABSOLUTE MAXIMUM POWER LEVELS IS NOT RECOMMENDED SINCE THIS COULD DAMAGE THE ASSOCIATED LOUDSPEAKER SYSTEM. PLEASE BE AWARE THAT MAXIMUM POWER CAN BE OBTAINED WITH VERY LOW SETTINGS OF THE GAIN CONTROLS IF THE INPUT SIGNAL IS VERY STRONG.

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be retained for future reference.
3. Obey all warnings in the operating instructions and on the back of the unit.
4. All operating instructions should be followed.
5. This product should not be used near water - i.e. bathtub, sink, swimming pool, wet basement, etc.
6. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or closed in a built-in enclosure that will impede the flow of cooling air.
7. This product should not be placed near a source of heat such as a stove, heater, radiator or another heat producing amplifier.
8. Connect only as power supply of the type marked on the rear side of the power supply cord.
9. Never break off the ground pin on the power supply cord. For more information on grounding, write for our free booklet: "Shock Hazard and Grounding."
10. Power supply cords should always be handled carefully. Never wrap on sharp equipment or power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.
11. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
12. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag, or an ammonia based household cleaner if necessary.
13. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation holes or any other openings.
14. This unit should be checked by a qualified service technician if:
    A. The power supply cord or plug has been damaged.
    B. Anything has fallen or been spilled into the unit.
    C. The unit does not operate correctly.
    D. The unit has been dropped or the enclosure damaged.
15. The user should not attempt to service the equipment. All service work should be done by a qualified service technician.

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